

Ariel Corporation Quality Assurance Plan Description

Item	Description	Activity Performed By	Ariel Furnished Documentation To End-User	Ariel Quality Control Review	Comment
1.0	Order review	Ariel	None	None	
2.0	Compressor frame				
2.1	• Pre-machining visual	Ariel	None	None	Inspection for casting damage & debris
2.2	• Dimensional	Ariel	None	None	Lot sample if outside sourced
2.3	• Material certification - mechanical & chemical	Supplier	None	Supplier Audit	
3.0	Crankshaft				
3.1	• Dimensional and contact percent	Ariel	None	Yes	
3.2	• Material certification - chemical	Ariel	None	Yes	
3.3	• Material certification - mechanical & chemical with traceability - Optional	Supplier	Optional	Yes	Optional - If crankshaft material certs purchased
3.4	• Final inspection & release audit	Ariel	None	Yes	
4.0	Connecting Rods				
4.1	• Dimensional	Ariel	None	None	Lot sample if outside sourced
4.2	• Material certification - mechanical & chemical	Supplier	None	Supplier Audit	
4.3	• Magnetic particle Inspection	Supplier and Ariel	None	Yes	100% (by both forge supplier and machine shop) stamped accepted
5.0	Crossheads				
5.1	• Dimensional	Ariel	None	None	
6.0	Crosshead Pins				
6.1	• Dimensional	Ariel	None	Ariel	Lot sample if outside sourced
6.2	• Magnetic particle Inspection	Ariel	None	Yes	100% at Supplier and Lot Sample at Ariel
7.0	Piston Rods				
7.1	• Dimensional	Ariel	None	None	
7.2	• Material chemistry	Supplier	None	Yes	
7.3	• Hardness - Heat treat confirmation	Ariel	None	Batch	
7.4	• Ion Nitride - Surface Hardening	Ariel	None	Batch	

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8.0	Pistons				
8.1	• Pre-Machining Visual	Ariel	None	None	
8.2	• Dimensional	Ariel	None	None	
8.3	• Material chemistry	Supplier	None	Supplier Audit	
9.0	Cylinder Body				
9.1	• Pre-Machining Visual	Ariel	None	None	
9.2	• Dimensional	Ariel	None	None	
9.3	• Material certification - mechanical & chemical	Supplier	None	Supplier Audit	
9.4	• Material certification - mechanical & chemical with traceability - Optional	Supplier	Optional	Yes	Optional - If cylinder material certs purchased
9.5	• Hydrotest	Ariel	Std Docs	Yes	
9.6	• Helium test - Optional	Optional	Optional	Yes	
9.7	• Ion-nitride - Bore Hardening	Ariel	None	Batch	ASTM A395, Steel and PRC (A536 Optional)
10.0	Assembly, Testing and Final Audit				
10.1	• As Built Clearance Record	Ariel	Std Docs	Yes	
10.2	• Rod Runout Record	Ariel	Std Docs	Yes	
10.3	• Unit Static Balance	Ariel	Std Docs	Yes	
10.4	• Mechanical Run Test	Ariel	Std Docs	Yes	
10.5	• Mechanical Quality Audit	Ariel	Std Docs	Yes	Assembler Audit
10.6	• QC Final Inspection / Audit	Ariel	Std Docs	Yes	Quality Audit

Std Docs (Standard Inspection Documentation) will be provided when selected in the order